Botulism

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■ Cite as: *CMAJ* 2025 January 13;197:E13. doi: 10.1503/cmaj.240638

1 Botulism is caused by a neurotoxin produced by *Clostridium botulinum*

Forms of botulism include food-borne (typically from home-canned foods), infant, wound (from intravenous drug or soil exposure), and adult intestinal colonization botulism.[1,2] Inhalational and iatrogenic (via intramuscular toxin injection) botulism are uncommon.[1] Botulism is rare in Canada (67 cases of food-borne botulism occurred between 2006 and 2021). Food-borne botulism causes proportionally more hospital admissions and deaths than other food-borne illnesses.[3]

2 Early signs include cranial nerve palsies causing diplopia, dysarthria, dysphonia, and dysphagia (the "4 Ds")

These can progress to ptosis, bilateral flaccid paralysis, and respiratory failure.[1,4] Food-borne botulism often presents with antecedent gastrointestinal symptoms, and wound botulism with concurrent skin infection.[1,2] Infant botulism involves constipation, anorexia, weakness, drooling, and hypotonia.[4]

3 Botulism is a clinical diagnosis; laboratory testing should not delay treatment

Confirmatory diagnosis requires detection of botulinum toxin via mouse bioassay, culture, or polymerase chain reaction testing of stool, gastric contents, serum, wound, or implicated food via the Botulism Reference Laboratory.[2,4,5] Microbiologist consultation is essential to ensure proper specimen collection.[5] Suspected or confirmed cases must be reported to local public health units immediately.[5]

4 Botulinum antitoxin can halt paralysis when administered within 24–48 hours of onset of illness[2]

Providers should contact their local or provincial ministries of health for supply.[4,5] Administration of botulinum antitoxin is via a single intravenous dose in an inpatient setting where potential anaphylaxis can be managed. Care is largely supportive, with the addition of antibiotics and débridement for wound botulism.[1,2]

5 Intravenous botulism immune globulin is the treatment for infant botulism up to 1 year of age and should be administered as soon as possible after clinical diagnosis

Intravenous botulism immune globulin is administered as a single intravenous infusion and can be accessed via the Health Canada Special Access Program.[4,5]

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Competing interests: None declared.

This article has been peer reviewed.

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Acknowledgements: The authors thank Elizabeth Leung and Ramzi Fattouh for their support and resources.

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